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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,160	12/29/2000	Merle L. Miller	2069.008400	8960

23720 7590 06/09/2004

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HOUSTON, TX 77042

EXAMINER
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HAROLD, JEFFEREY F

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/752,160

Applicant(s)

MILLER ET AL.

Examiner

Jefferey F Harold

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 8,11,15,18 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. ***Claims 1-7, 9, 10, 12-14, 16, 17, 19, 20, 22 and 23*** are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou (United States Patent 5,926,544).

Regarding **claim 1**, Zhou discloses DC feed with line status change adaptation. In addition Zhou discloses a method for DC feed control for a line card, comprising: receiving a signal from a subscriber line comprising at least one of a voice component and DC component; converting the voice component of the signal to a digital voice signal using an A/D converter to allow further processing of the digital voice signal; converting the DC component of the signal to a digital signal using the A/D converter employed to convert the voice component of the signal; adjusting the a DC feed to the subscriber line based on the digital signal, as disclosed at column 5, line 65 through column 6, line 60 and exhibited in figures 3 and 5.

Regarding **claim 2**, Zhou discloses everything claimed as applied above (see claim 1), in addition Zhou discloses wherein adjusting the DC feed comprises: integrating the digital signal; and adjusting a voltage provided to the subscriber line based on the integrated signal, as disclosed at column 5, line 65 through column 6, line 60 and exhibited in figures 3 and 5.

Regarding **claim 3**, Zhou discloses everything claimed as applied above (see claim 1), in addition Zhou discloses wherein adjusting the DC feed comprises adjusting the current level applied to the subscriber line, as disclosed at column 5, line 65 through column 6, line 60 and exhibited in figures 3 and 5.

Regarding **claim 4**, Zhou discloses everything claimed as applied above (see claim 2), in addition, Zhou discloses wherein allowing further processing of the digital voice signal comprises providing the digital voice signal to a CODEC for further processing, as disclosed at column 7, line 53 through column 8, line 43 and exhibited in figures 3 and 6.

Regarding **claim 5**, Zhou discloses a method for DC feed control for a line card, comprising: determining if the line card is operating in a current limiting region of a DC feed curve: wherein the curve is determined, which reads on synthesizing a curve in the current limit region of the DC feed curve; determining a loop voltage based on the synthesized curve; and applying the loop voltage to the subscriber line, as disclosed at column 5, lines 27-46; column 5, line 65 through column 6, line 60 and exhibited in figures 3-5.

Regarding **claim 6**, Zhou discloses everything claimed as applied above (see claim 5), in addition Zhou discloses wherein determining if the line card is operating in the current limit region includes: generating a current value proportional to a loop current flowing from the subscriber line; and determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value, as disclosed at column 5, lines 47-65 and exhibited in figure 4.

Regarding **claim 7**, Zhou disclose everything claimed as applied above (see claim 6), in addition Zhou discloses wherein determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value includes determining if the loop current is greater than a first preselected value, as disclosed at column 5, lines 47-65 and exhibited in figure 4.

Regarding **claims 9, 10, 12-14, 16, 17, 19, 20, and 22-25** Zhou discloses everything claimed. In addition claims 9, 10, 12-14, 16, 17, 19, 20, 22 and 23 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1-7.

#### ***Allowable Subject Matter***

2. **Claims 8, 11, 15, 18 and 21** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 5, 9, 12, 16, 20 and 23 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F Harold whose telephone number is 703-306-5836. The examiner can normally be reached on Monday - Friday 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JFH  
May 28, 2004

Jefferey F Harold  
Examiner  
Art Unit 2644

  
**XU MEI**  
**PRIMARY EXAMINER**